



PATENT  
P56533

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

JONG-SEO CHOI, *et al.*

Serial No.: 09/964,375

Examiner: QUATERMAN, KEVIN J.

Filed: 28 September 2001

Art Unit: 2879

For: CATHODE FOR ELECTRON TUBE HAVING NEEDLE-SHAPED  
CONDUCTIVE MATERIAL AND METHOD OF PREPARING THE CATHODE  
(as amended)

**REQUEST FOR CORRECTED PTOL 85 (Notice of Allowance)**

**Mail Stop : Issue Fee**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

The attorney for the Applicant notes that the PTOL-85 (Notice of Allowance) mailed on 7 July 2005 for the above-referenced Application bears an error.

**Please correct the title of the invention to :**

**– CATHODE FOR ELECTRON TUBE HAVING NEEDLE-SHAPED CONDUCTIVE MATERIAL AND METHOD OF PREPARING THE CATHODE –**

**on PTOL-85, as shown in attached a copy of page 2 of an Amendment filed on 2 September 2003. Please note that the title was amended as above in the Amendment filed on 2 September 2003.**

Copies of page 2 of Amendment filed on 2 September 2003 and a copy of date-stamped postcard receipt of the Amendment filed on 2 September 2003 are attached.

Respectfully submitted,



Robert E. Bushnell  
Attorney for Applicant  
Reg. No.: 27,774

Enclosure: A Copy of PTOL-85 mailed on 1 July 2005  
Copy of page 2 of an Amendment filed 2 September 2003  
A copy of date-stamped postcard receipt of the Amendment filed on 2 September 2003

Folio: P56533  
Date: 7/11/2005  
I.D.: REB/fw

Complete and send this form, together with applicable fee(s), to: **Mail**

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7590

07/01/2005

Robert E. Bushnell  
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Washington, DC 20005



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,375	09/28/2001	Jong-Seo Choi	P56533	2237

**TITLE OF INVENTION:** CATHODE FOR ELECTRON TUBE AND METHOD OF PREPARING THE CATHODE

HAVING NEEDLE-SHAPED CONDUCTIVE MATERIAL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$1700	10/03/2005

EXAMINER	ART UNIT	CLASS-SUBCLASS
QUARTERMAN, KEVIN J	2879	313-309000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

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3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

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Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

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5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

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**IN THE SPECIFICATION**

1. Please amend the title of the invention as follows:

**CATHODE FOR ELECTRON TUBE HAVING NEEDLE-SHAPED  
CONDUCTIVE MATERIAL AND METHOD OF PREPARING THE  
CATHODE**

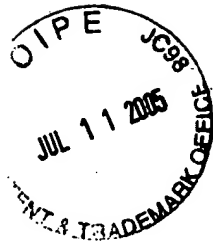
2. Please amend paragraph [0046]-[0047] as follows:

[0046] FIG. 6 is a scanning electron microscope (SEM) photograph of the oxide cathode layer shown in FIG. 4, taken with 400 times magnification;

[0047] FIG. 7 is a photograph of a scanning electron microscope (SEM) photograph of the cathode shown in FIG. 4, taken with 3000 times magnification;

3. Please amend paragraph [0059]-[0060] as follows:

[0059] In contrast with the electron-emitting material layer of the conventional oxide cathode, which is made of a barium-based carbonate, for example, a ternary carbonate  $(\text{Ba-Sr-Ca})\text{CO}_3$  or a binary carbonate  $(\text{Ba-Sr})\text{CO}_3$ , the oxide cathode according to the present invention contains a needle-shaped conductive material in an electron-emitting material layer, as shown in FIGS. 4 and 5. The needle-shaped conductive material is electrically conductive with a specific resistance not higher than  $10^{-1}$  cm (centimeters), and is more advantageous to form a conductive path within the electron-emitting material



P56533 2 September 2003

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Applicant: JONG-SEO CHOI *et al.*

S.N.: 09/964,375

Filed: 28 September 2001

For: CATHODE FOR ELECTRON TUBE AND METHOD OF .....

**Document(s) filed:**

1. Amendment (responsive to Paper No. 5 mailed on 5/30/03)
2. Check #44705 for \$510.00 & Fee Transmittal



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